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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,896	02/24/2004	Shicai Liu	BGB 04-1-1	6728
23531 7590 04/03/2009 SUTTER SWANTZ PC LLO 14301 FNB PARKWAY SUITE 220 OMAHA, NE 68154				
EXAMINER				
BADR, HAMID R				
ART UNIT		PAPER NUMBER		
1794				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/786,896

Applicant(s)

LIU ET AL.

Examiner

HAMID R. BADR

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-15 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-15 and 17-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- Paper No(s) Mail Date ____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s) Mail Date ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/28/2009 has been entered.

Claims 1-8, 10-15 and 17-19 are being considered on the merits.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-8, 10-15 and 17-19 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Since there is no guidance as how to use the plane to defat the materials, simply stating that a "plane" will be used is not enabling.

3. Case law holds that applicant's specification must be "commensurately enabling [regarding the scope of the claims]" *Ex Parte Kung*, 17 USPQ2d 1545, 1547 (Bd. Pat.

App. Inter. 1990). Otherwise **undue experimentation** would be involved in determining how to practice and use applicant's invention. The test for undue experimentation as to whether or not all compounds within the scope of claims 1-8, 10-15 and 17-19 can be used as claimed and whether claims 1-8, 10-15 and 17-19 meet the test is stated in *Ex parte Forman*, 230 USPQ 546, 547 (Bd. Pat. App. Inter. 1986) and *In re Wands*, 8 USPQ2d 1400, 1404 (Fed.Cir. 1988). Upon applying this test to claims 1-8, 10-15 and 17-19, it is believed that undue experimentation **would** be required because:

4. Level of skill in the art: The use of the word "plane" as a defatting means does not enable a person of skill in the art to make and use the invention.
5. The presence of Examples: The example provided by the applicant has a limited showing with respect to defatting the rawhide using a "plane".
6. Level of Unpredictability: Simply mentioning the words "via a plane" as means of defatting rawhide will require undue experimentation.
7. There is **no** direction or guidance presented for what is meant by "a plane".
8. In light of the above factors, it is seen that undue experimentation would be necessary to make and use the invention of claims 1-8, 10-15 and 17-19.
9. Claims 1-8, 10-15 and 17-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. While there is support to

recite dry molding process wherein molding is by knitting by hand, there does not appear to be any support to recite wet molding process wherein molding is by hand.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-8, 10-15 and 17-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 1 is indefinite for "plane". It is unclear what is meant by "plane". It is not clear what the applicant regards as the invention. The word "plane" as a defatting means is unsearchable, unless more information is provided for the clarification purposes. For the purpose of continuing the prosecution of this application, the word "plane" is being interpreted as the plane of a knife.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8, and 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fisher (US 4,364,925) in view of Spanier et al. (US 5,114,704), and Mohilef (US 5,149,550) and Spanier (US 4,997,671)
3. Fisher discloses a product containing animal food and structure-supporting fibers in fibrous form and remaining in its compacted, shaped, and molded form (Abstract).
4. He teaches mixing the food components having low moisture and molding the mixture into desired size and shape (Col. 2, lines 4-6). The shape of the food may be a bone, a ball, a ring, an animal, a stick or any other imaginative shape (Col. 2, lines 11-14).
5. He discusses controlling the hardness of the pet food by controlling the amount of fiber incorporated into the formulation, the length, shape, and width of the fibers, the presence or absence of the binding material, the pressure employed in compacting and the number of layers which are put together (Col. 2, lines 20-29). It is obvious to optimize the length, shape, and width of fibers and use a binding material to agglutinate the materials together upon application of pressure in a mold.
6. He teaches building up laminations of pet food to yield an extra hard chew resistant product (Col. 2, lines 59-65).
7. He discloses the suitable sources of animal fibers derived from animal tissue for example from the skin, muscles, intestines, tendons, cowhide, rawhide etc which can be cut, chipped, ground, shredded, beaten etc. and be incorporated into the molded food to enhance its unit integrity (Col. 4, lines 56-68). In animal hide, collagen includes other fibrous proteins such as elastin, and reticulin (Col. 5, lines 5-10). It is clear that the

broad disclosure of molding in Fischer would intrinsically include molding steps as presently claimed.

8. He teaches breaking the fiber bundles by cutting, chopping, shredding, shearing and then realigning these fibers to form fiber interlocks (Col. 5, lines 14-16). It is obvious to optimize the processes by varying the length and thickness of fibrous material to make it suitable for the final product.

9. He suggests using other protein sources such as soy protein, egg white, wheat gluten which can be converted to simulated fiber of natural beef (Col. 5, lines 46-49).

10. He teaches liming the hides, fleshing, washing and adjusting to optimum pH and the hide is then comminuted in a machine with openings of different diameters (Col. 6, lines 53-58).

11. Fisher states that in addition to undigested collagen fibers, digested or partially digested fibers may be incorporated. Cowhide may be treated with a proteolytic enzyme such as papain or pepsin in dilute acidic solutions (Col. 6, lines 59-65). Additionally, completely digested cowhide in the form of hide binder or gelatin, partially digested cowhides such as swollen collagen and undigested cowhides may be incorporated into the pet food (Col. 7, lines 1-5).

12. Fisher is silent on defatting the skin or hide using mechanical means.

13. Spanier et al. '704 discloses defatting hide or animal skin using a knife. They disclose that any adipose tissue (fat containing tissue) remaining on the flesh side of the skin is removed in the process of fleshing. A special knife is used for hand fleshing, but

the process is usually carried out by means of fleshing machine comprising a revolving roller fitted with sharp spiral blades. (Col. 11, lines 10-15).

14. Fisher is silent with respect to pretreatment comprising intenerating and rinsing as well as degreasing and drying of the hides.

15. Mohilef discloses methods for making pet chews where the ligaments from cattle or other animals are defatted and dried to be used for pet food. (Abstract).

16. He teaches removing the appended fat from animal tissues by either using an aqueous solution (Col. 2, lines 30-37).

17. He teaches placing the ligaments in an industrial tripe washer containing warm water (about 100F). Suitable amounts of alkaline material are added to bring the pH of the solution to pH 13. The ligaments are then "washed with agitation or tumbling" with the degreasing solution for about 15-20 minutes (Col. 3 line 61 to Col. 4, line 7).

18. He teaches rinsing the defatted material with fresh water to bring the pH back to about pH 7 to make sure that the degreasing solution has been rinsed away (Col. 4, lines 9-17). It is obvious to rinse the hides in a revolving device including a rotating drum in order to expose all surfaces to the rinsing water. Use of rotating drums is known in the art.

19. Mohilef teaches the drying of the treated animal material at 140-150F using circulating air. The drying process may take 48-72 hours (Col. 4, lines 27-33).

20. As an example 750 pounds cattle ligaments is mixed with 160 gallons of warm water (100F) to which 15 pounds of sodium hydroxide is added causing the pH to jump to 13.1. The ligaments are washed for about 15 minutes. The ligaments are then

washed with fresh water to bring the pH back to 7.0. (Col. 4, Example 1). It is obvious to dry the washed and wet material to stabilize the material. It is also obvious to dry the material at two stages using two temperatures to avoid extra hardening of the washed material. Drying the material before smoking will also help the product to develop a better color as well as absorb the smoke flavor. This is also known in the art.

21. Fisher, Spanier '704 and Mohilef are silent with respect to the use of hydrogen peroxide, using second and/or deeper layer of the animal peltry, sun drying, and binding agents such as rice and tapioca.

22. It is well known that hydrogen peroxide can be used for bleaching proteinaceous materials such as hair. Commercial Hydrogen peroxide solutions have a concentration of 30% which can be diluted with water to give a 15% solution of hydrogen peroxide used in the instant application.

23. With regard to using the second and/or deeper layer of animal peltry, it is obvious that the usual flesh side of the skin is used for animal chews and that the grain side is used for leather making. It is also obvious that to use the flesh side of the skin, the layers composing the skin should be segregated (delaminating), it is also obvious that the teachings of the references cited above applicable to the whole animal hide will be applicable to inner layers of the hide.

24. It is also obvious to reduce the water content of the hide by dripping the water or shaking the water off and additionally to be able to fit it into a mold of a definite size, one needs to cut the hide into pieces.

25. Sun drying of animal hide is well known in the industry. It is obvious to soak (re-hydrate) dried skin to be able to mold it since a dry material will not assume the shape of a mold.
26. With regard to the itenerating-reagent of claim 7, the examiner is taking the position of interpreting such agent as a proteolytic enzymes used for softening the hides as addressed by Fisher. Use of meat tenderizers such as papain, pepsin, trypsin and the like are well know in the industry. It is obvious to use these softening agents in accordance with the known procedures in the industry or the manufacturer's method of use. The amount of the intenerating material required for the peltry and the amount of water in the process can readily be optimized by those of skill in the art.
27. Fisher, Spanier '704 and Mohilef are silent regarding the use of starch in pet chews.
28. Spanier '671 discloses using starches such as corn starch, wheat starch, rice starch (Col. 5, lines 57-66) and root starches such as potato, cassava and tapioca (Col. 6, lines 42-46) in the dog snacks. Starches are used as textural agent to produce products that is not tough or stringy.
29. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the teachings of Fisher by adopting and using the teachings of Spanier '704 and Mohilef to make a pet product using defatted pig hide or cow hide and the teachings of Spanier '671 to include tapioca etc. One would have done so to benefit from a product from hides. Absent any evidence to contrary and

based on the combined teachings of the cited references, there would have been a reasonable expectation of success in making such a product for pets.

30. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fisher, Spanier '704, Spanier '671, and Mohilef as applied to claims 1-8, 10-15, further in view of Kerres (US 4,270,464) .

31. Fisher, Spanier '704, Spanier '671, and Mohilef are silent with respect to smoking.

32. Kerres discloses details of a smoke generator and method for smoking food products such as meat, sausage and fish using sawdust (Abstract). The smoker produces product with outstanding smell and taste and excellent uniformity of color.

33. Kerres teaches how to generate smoke using sawdust in a chamber which includes sawdust feeding device, heating means to ignite the sawdust, means for supplying fresh air into the smoke generating chamber and duct means for exhausting the smoke produced in the chamber and for feeding the smoke to a smokehouse (Col. 1, lines 45-62).

34. Given the process of smoking as disclosed by Kerres, it is obvious to optimize the amounts and ratios of sawdust, sugar and water as presently claimed in order to obtain the desired level of smoking.

35. It is also known that sucrose may be burned to generate smoke for flavoring purposes. The well known Chinese process for tea smoke employs sucrose as one of

the component. The proportions of the well known Chinese tea smoke incorporating sucrose (table sugar) are also known.

36. The smoking process is well known in the art and the temperature range and smoking time can be optimized for various products as presently claimed.

37. It would have been obvious to use smoker utilizing sawdust and sucrose to generate smoke to treat the pet product. The smoking will affect the flavor of the product as well as acting as a preservative for the pet product.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAMID R. BADR whose telephone number is (571)270-3455. The examiner can normally be reached on M-T 5:30 to 4:30 (Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571) 272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hamid R Badr
Examiner
Art Unit 1794

/Callie E. Shosho/
Supervisory Patent Examiner, Art Unit 1794